

## **ABSTRACT OF THE INVENTION**

One embodiment of the invention is a method of specifying routes for a group of nets. The method specifies a total cost. It then performs a first depth-first search to identify, for the group of nets, a complete routing solution that has a cost that does not exceed the total cost. A routing solution for a set of nets includes a route for each net in the set. If the search does not find the complete routing solution, the method then increments the total cost and performs a second depth-first search to identify a complete routing solution for the group of nets that has a cost that does not exceed the incremented total cost.

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